

The CDC Program Assessment of Building the Foodborne and Diarrheal Diseases Program Area Module Using CDFs

**Christopher Braden, M.D.
Foodborne and Diarrheal Diseases Branch,
Division of Bacterial and Mycotic Diseases,
National Center for Infectious Diseases**



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Foodborne and Diarrheal Diseases Surveillance

- Public Health Laboratory Information System (PHLIS)
 - DOS-based system
 - SAS database
 - Isolates from state public health laboratories
 - *Salmonella*, *Shigella*, *E. coli* O157, *Campylobacter*, *Yersinia*, *Listeria*
 - Includes isolate subtypes (e.g., serotype)
 - Includes extended form for FoodNet



Foodborne and Diarrheal Diseases Surveillance

- Cholera and Other *Vibrio* Illness Surveillance System
 - Paper forms
 - Data entry at CDC in Access
 - Extensive data on illness, travel, seafood consumption, and shellfish harvest conditions

Foodborne and Diarrheal Diseases Surveillance

- Typhoid Fever Surveillance
 - Paper forms
 - Data entry at CDC
 - Epi Info database
 - Extensive data on illness, travel, vaccination

Foodborne and Diarrheal Diseases Surveillance

- Listeria Initiative
 - Under development
 - Links surveillance data, exposure data, and genotype data for prospective, ongoing outbreak identification and statistical analyses for food vehicles

Foodborne and Diarrheal Diseases Surveillance

- Botulism Surveillance
 - Extensive clinical data
 - Data collected and entered by CDC staff
 - Access database
- Foodborne Outbreak Surveillance
 - Descriptive data for each foodborne outbreak
 - Web-based with SQL database



Foodborne and Diarrheal Diseases Program Area Module

- High priority for states
- Rapid implementation concurrent with next version of NEDSS base system
- No program funds
- Limited program staff time

→ CDFs

Program Staffing and Time Line

- Started in earnest in October 2003, finished in April (7 months)
- Three lead program staff @ 10% ave.
- Requirements gathering
- Reviewed variables to include
- Supplied data dictionaries
- Supplied field contents (drop down lists)
- Reviewed and supplied standard vocabularies (SNOMED, LOIC, Custom)



What was included

- NETSS and PHLIS type variables
 - Basic demographics (NBS)
 - Travel
 - Epidemiologic- water exposure, daycare, food worker
 - Isolate identification numbers
 - Isolate subtypes (multiple)
- Additional variables for FoodNet

What was not included

- Listeria Initiative
- Botulism surveillance
- Foodborne Outbreak Surveillance
- Many variables from Typhoid Fever surveillance, Vibrio surveillance

All will require maintenance apart from NEDSS

CDF Technical Limitations

- Salmonella Serotypes (~2500)

- O Ag : H1 Ag : H2 Ag

- 4,[5],12: i : 1,2,[7]

- S. Typhimurium

- Wanted:

O Ag

H1 Ag

H2 Ag

Name

- Able to implement:

- Drop down list of 50 serotype names

- Text field

CDF Technical Limitations

- No field functions
 - No logic carried from one field to another
 - Limited list of pathogen types
 - Text fields- inaccurate recording
 - No auto search of list
- Simple screen functions
 - No pop-up instructions

Loss of data accuracy



CDF Advantages

- Rapid implementation
 - coding stage
- Amenable to changes
- Less costly?

No Way Around Standard Vocabulary

- SNOMED
 - Incomplete subtype taxonomy
 - Erroneous hierarchy
- LOINC
 - Non-systematic
 - Many extraneous tests
- Requires interim custom vocabulary and long term commitment to improve standard vocabulary

Future Plans

- Datamart development
- Continue to collaborate on accurate and useful standard vocabulary
- Identifying and documenting additional requirements
 - State and local
 - CDC
 - Other partners
- Foodborne and Diarrheal Diseases PAM v. 2.0
 - Fully functional